Shaw Environmental, Inc.
312 Directors Drive
Knoxville, TN 37923
865.690.3211
Fax 865.690.3626

Shaw™ Shaw Environmental, Inc.

August 19, 2009

SHAW-MC-CK11-0444
Project No. 800486

Mr. Lee Coker
U.S. Army Corps of Engineers, Mobile District
Attn: EN-GE/Lee Coker
109 St. Joseph Street
Mobile, Alabama 36602

Contract: DACA21-96-D-0018, Task Order CK11
Fort McClellan, Alabama

Subject: Addendum to the Final Interim Removal Action Work Plan, Range 20 Soil Remediation on USFWS Property, dated July 2009

Dear Mr. Coker:

This addendum to the Final Work Plan for Range 20 Soil Remediation on U.S. Fish & Wildlife Service (USFWS) Property is a result of the recently held meeting at Fort McClellan on August 6, 2009. Attendees at the meeting included members of the USFWS, U.S. Army Fort McClellan Transition Force, and Shaw Environmental, Inc. The purpose of the meeting was to resolve USFWS concerns regarding the planned soil remediation fieldwork at Range 20, particularly their concerns about construction of new haul roads, backfilling after soil removal and stabilization, and final site restoration. This work plan addendum addresses those issues by further describing additional engineering controls and procedures that will be implemented during site remediation and restoration activities at Range 20.

The following sections to the *Final Interim Removal Action Work Plan, Range 20 Soil Remediation on USFWS Property* have been revised to address the concerns recently raised by the USFWS.

3.5.3 Stabilization Work Area

The soil stabilization work area established within the fenced area at Range 20 has been relocated because a separate contractor (Tetra Tech, Inc.) is currently using that area for the MEC clearance project. Therefore, soil stockpile and stabilization will be conducted north of Bains Gap Road, northwest of the Range 20 fenced area. Attached Figure 3-1 has been revised to show the new stabilization area.

3.7 Site Restoration

Site restoration will begin only after the confirmatory sampling results from the offsite laboratory indicates the lead concentrations in the remaining site soils are less than 500 mg/kg. The downgradient side of the excavation areas will be regraded so that storm water is not trapped within the area. To minimize impacts to the refuge, existing site soils will not be used as fill material. Therefore, the excavated areas will be backfilled with 18 inches of fill material and then covered with 6 inches of topsoil. The fill material will be transported to the site by a local vendor via 25-ton dump trucks (or equivalent). The material will be placed in the excavation areas starting at the top of the excavation and progressing downslope. A 5-ton roller (or approved equivalent) will be used to compact the fill material. After the 18-inch-layer of fill material is compacted in the excavation areas, 6 inches of topsoil will be added and compacted via the same procedure used for the fill material. Assuming 30 percent compaction, approximately 1,910 cubic yards of topsoil and 5,735 cubic yards of fill material will be required to backfill the excavated areas at the site.

Following placement and compaction of the topsoil, the slopes will be seeded and stabilized. The slopes will be seeded with a Warm Season Grass Mix (Ernst Seeds or approved equivalent) at a rate of 40 pounds per acre. In addition, a companion crop may be added to further enhance and raise success levels for stabilization and vegetation growth and sown at a rate of 25 pounds per acre. Seed will either be sown by hand or using a mechanical broadcaster. Upon completion of seeding, the slopes will be stabilized with a coir fabric. A RoLanka BioD Mat 90 (980 g/m) coir fabric (or approved equivalent) will be installed as per manufacturer's specifications. Special attention will be given to anchoring the upslope edge of the material both via wooden stake and burying the upper edge of the material to eliminate undermining.

Following seeding and stabilization of the slope, the re-vegetated areas will be monitored for one year to determine success. Success will be defined as 85 percent areal vegetated coverage and no areas of defined washouts. The site will be visually inspected quarterly or after significant rainfall events (>1 inch) to determine overall success of the stabilization effort. It should be noted that the Shaw site manager will consult with the USFWS throughout the duration of the project to ensure appropriate site restoration procedures are being met. The approximate extent of the total impacted area for re-vegetation and site restoration is shown on attached Figure 3-1.

We plan to mobilize for this fieldwork during the latter part of September 2009. Therefore, please provide any additional comments/concerns or concurrence by August 30, 2009.

At your request, I have distributed copies of this work plan addendum according to the attached distribution. If you have questions, or need further information, please contact me at (865) 694-7361.

Sincerely,

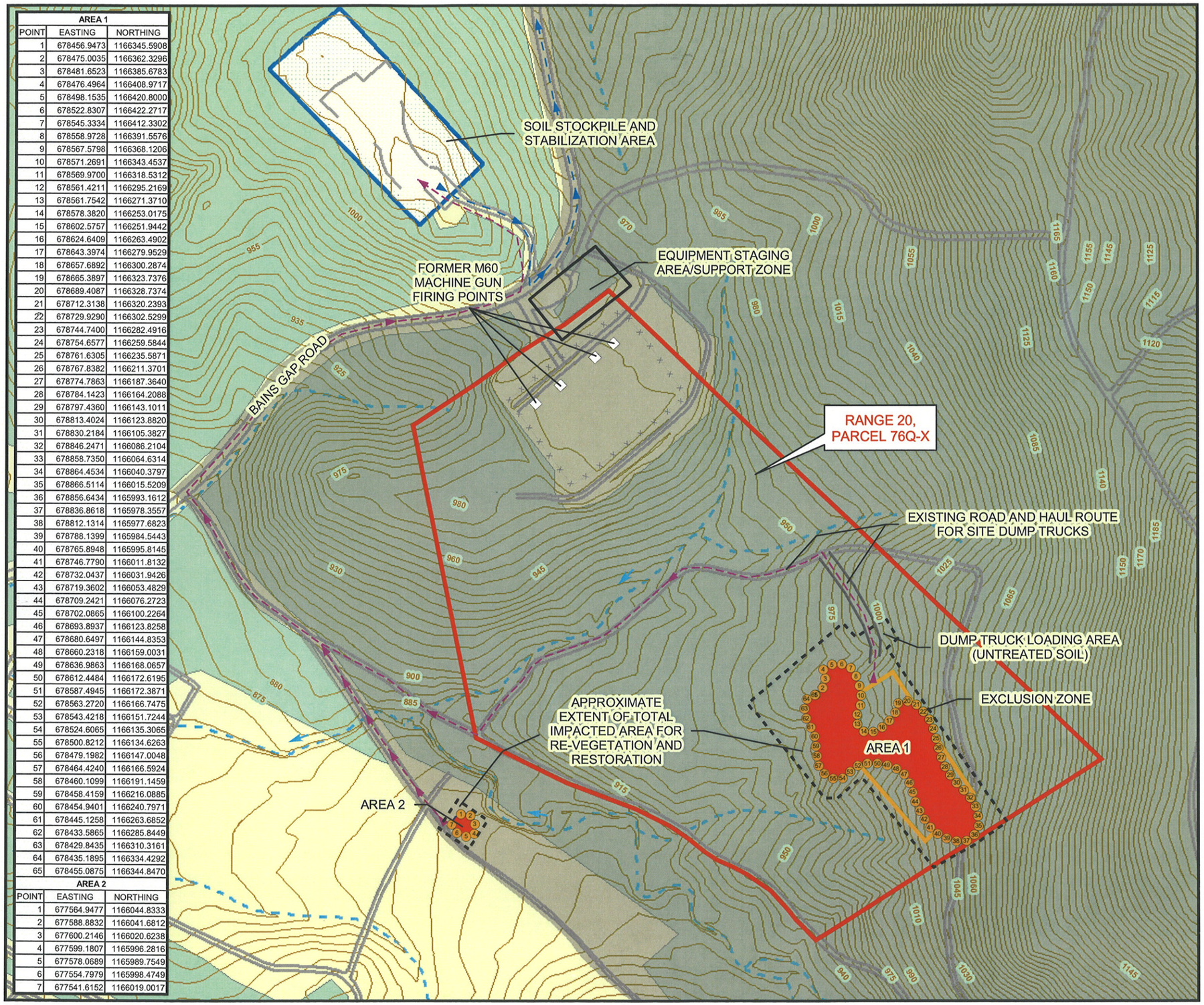
Stephen G Moran

Stephen G. Moran, P.G.
Project Manager

Figure 3-1

Range 20, Parcel 76Q-X, Soil Removal Site Plan

Fort McClellan, Alabama



AREA 1		
POINT	EASTING	NORTHING
1	678456.9473	1166345.5908
2	678475.0035	1166362.3296
3	678481.6523	1166385.6783
4	678476.4964	1166408.9717
5	678498.1535	1166420.8000
6	678522.8307	1166422.2717
7	678545.3334	1166412.3302
8	678558.9728	1166391.5576
9	678567.5798	1166368.1206
10	678571.2691	1166343.4537
11	678569.9700	1166318.5312
12	678561.4211	1166295.2169
13	678561.7542	1166271.3710
14	678578.3820	1166253.0175
15	678602.5757	1166251.9442
16	678624.6409	1166263.4902
17	678643.3974	1166279.9529
18	678657.6892	1166300.2874
19	678665.3897	1166323.7376
20	678689.4087	1166328.7374
21	678712.3138	1166320.2393
22	678729.9290	1166302.5299
23	678744.7400	1166282.4916
24	678754.6577	1166259.5844
25	678761.6305	1166235.5871
26	678767.8382	1166211.3701
27	678774.7863	1166187.3640
28	678784.1423	1166164.2088
29	678797.4360	1166143.1011
30	678813.4024	1166123.8820
31	678830.2184	1166105.3827
32	678846.2471	1166086.2104
33	678858.7350	1166064.6314
34	678864.4534	1166040.3797
35	678866.5114	1166015.5209
36	678856.6434	1165993.1612
37	678836.8618	1165978.3557
38	678812.1314	1165977.6823
39	678788.1399	1165984.5443
40	678765.8948	1165995.8145
41	678746.7790	1166011.8132
42	678732.0437	1166031.9426
43	678719.3602	1166053.4829
44	678709.2421	1166076.2723
45	678702.0865	1166100.2264
46	678693.8937	1166123.8258
47	678680.6497	1166144.8353
48	678660.2318	1166159.0031
49	678636.9863	1166168.0657
50	678612.4484	1166172.6195
51	678587.4945	1166172.3871
52	678563.2720	1166166.7475
53	678543.4218	1166151.7244
54	678524.6065	1166135.3065
55	678500.8212	1166134.6263
56	678479.1982	1166147.0048
57	678464.4240	1166166.5924
58	678460.1099	1166191.1459
59	678458.4159	1166216.0885
60	678454.9401	1166240.7971
61	678445.1258	1166263.6852
62	678433.5865	1166285.8449
63	678429.8435	1166310.3161
64	678435.1895	1166334.4292
65	678455.0875	1166344.8470

AREA 2		
POINT	EASTING	NORTHING
1	677564.9477	1166044.8333
2	677588.8832	1166041.6812
3	677600.2146	1166020.6238
4	677599.1807	1165996.2816
5	677578.0689	1165989.7549
6	677554.7979	1165998.4749
7	677541.6152	1166019.0017

Legend

- Location to be Surveyed and Staked to Demarcate Excavation Area (Coordinates Listed in Table)
- Lead Concentration Above 500 mg/kg (Proposed Soil Removal Area)
- Range 20 RI Study Area
- M60 Machine Gun Impact Zone
- Soil Stabilization Area
- Equipment Staging Area/Support Zone
- Wooded
- Not Wooded
- United States Fish and Wildlife Service (USFWS) Property
- Roads
- Projected Haul Route for Site Dump Trucks to Follow Existing Firebreaks and Roads (Untreated Soil)
- Haul Route for Off-Site Disposal
- Surface Drainage Feature (Dashed where Intermittent)
- Topographic Contour (5-foot interval)
- Surface Water Flow Direction

250 0 250 Feet

NAD83 State Plane Coordinates

N

Shaw Environmental, Inc.

U.S. Army Corps of Engineers Mobile District

Contract No. DACA21-96-D-0018

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